

In the claims:

Please amend the following claims:

5/21/78

1. (twice amended) A process for forming a layer of low dielectric constant material having a thickness, comprising:

B1

depositing a first layer of low dielectric constant material by means of plasma enhanced vapor deposition, at a first power level;

5 then depositing a second layer of the low dielectric constant material by means of plasma enhanced vapor deposition, at a second power level that is higher than said first power level; and

repeating the preceding two steps until said thickness is reached.

5/21/78

9. (twice amended) A process for depositing a layer of black diamond on a silicon wafer to a thickness, comprising:

B2

through chemical vapor deposition, from a first gaseous mixture of methyl silane and nitrous oxide, enhanced by a helium plasma at a power level that is less than about 70 watts, depositing a low power layer of black diamond for about 10 seconds, thereby forming a layer having a thickness between about 700 and 1,000 Angstroms;

15 then through chemical vapor deposition, from a second gaseous mixture of methyl silane, nitrous oxide, and oxygen, enhanced by a helium plasma at a power level of

TSMC00-079

B2 and
between about 70 and 200 watts, depositing a high power layer of black diamond for about 10 seconds, thereby forming a layer having a thickness between about 700 and 1,000 Angstroms; and
repeating the preceding two steps until said thickness is reached.

5 14. (twice amended) A process for forming a dual damascene structure on a silicon wafer,
B2 and comprising:

through chemical vapor deposition, from a first gaseous mixture of methyl silane and nitrous oxide, enhanced by a helium plasma at a power level that is less than about 70 watts, depositing a low power layer of black diamond for about 10 seconds, thereby
10 forming a layer having a thickness between about 700 and 1,000 Angstroms;

B3 then through chemical vapor deposition, from a second gaseous mixture of methyl silane, nitrous oxide, and oxygen, enhanced by a helium plasma at a power level of between about 70 and 200 watts, depositing a high power layer of black diamond for about 10 seconds, thereby forming a layer having a thickness between about 700 and 1,000
15 Angstroms;

repeating the preceding two steps until a completed black diamond layer has been formed;

patterning and etching said completed black diamond layer in order to form a wiring trench;

20 patterning and etching said wiring trench down to the level of the silicon wafer,